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Huang, David
Smith, Brian J
Street, Ian P

<120> Peptides and Therapeutic Uses Therefor

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<141> 2005-12-08

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<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  16
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Ile Ala Ala Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1               5                   10
```

<210> 17
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 17

<220>
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<223> X = any amino acid residue, wherein it is linked to residue 11 by
      a linker.

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = any amino acid residue, wherein it is linked to residue 4 by
      a linker

<400> 17

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Ile Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1               5                   10
```

<210> 18
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 18

<220>
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<222> (4)..(4)
<223> X = any amino acid residue, wherein it is linked to residue 11 by
      a linker

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = any amino acid residue, wherein it is linked to residue 4 by
      a linker

<400> 18

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Ile Ala Lys Xaa Leu Ala Lys Ile Gly Asp Xaa Phe
1               5                   10
```

<210> 19
<211> 13
<212> PRT
<213> Artificial Sequence

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<220>
<223>  Peptide 19


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<222>  (5)..(5)
<223>  X = any amino acid residue, wherein it is linked to residue 12 by
       a linker

<220>
<221>  MISC_FEATURE
<222>  (12)..(12)
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       a linker

<400>  19

Lys Tyr Ala Lys Xaa Leu Ala Lys Ile Gly Asp Xaa Phe
1               5                   10


<210>  20
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 20


<220>
<221>  MISC_FEATURE
<222>  (4)..(4)
<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       a linker

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  20

Tyr Gly Arg Xaa Leu Arg Arg Met Ser Asp Xaa Phe
1               5                   10


<210>  21
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 21


<220>
<221>  MISC_FEATURE
<222>  (4)..(4)
<223>  X = any amino acid residue, wherein it is linked to residue 11 by
```

a linker

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = any amino acid residue, wherein it is linked to residue 4 by
      a linker

<400> 21

Ile Ala Arg Xaa Leu Ala Gln Val Gly Asp Xaa Met
1   5   10

<210> 22
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 22

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<223> X = any amino acid residue, wherein it is linked to residue 11 by
      a linker

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = any amino acid residue, wherein it is linked to residue 4 by
      a linker

<400> 22

Val Gly Arg Xaa Leu Ala Ile Ile Gly Asp Xaa Ile
1   5   10

<210> 23
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 23

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      a linker

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = any amino acid residue, wherein it is linked to residue 4 by
      a linker

<400> 23

```
Ile Ala Gln Xaa Leu Ser Ser Ile Gly Ser Xaa Phe
1               5                   10
```

```
<210>  24
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 24


<220>
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<223>  Aib

<220>
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<222>  (4)..(4)
<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       a linker

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  24
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```
Ile Xaa Gln Xaa Leu Arg Arg Ile Ala Asp Xaa Phe
1               5                   10
```

```
<210>  25
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 25


<220>
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<222>  (4)..(4)
<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       a linker

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  25
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Tyr Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1               5                   10
```

<210> 26
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 26

<220>
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<222> (4)..(4)
<223> X = any amino acid residue, wherein it is linked to residue 11 by
a linker

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = any amino acid residue, wherein it is linked to residue 4 by
a linker

<400> 26

Ala Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1   5   10

<210> 27
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 27

<220>
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a linker

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = any amino acid residue, wherein it is linked to residue 4 by
a linker

<400> 27

Ile Ala Gln Xaa Ala Arg Arg Ile Gly Asp Xaa Phe
1   5   10

<210> 28
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 28

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<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       a linker

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  28

Ile Ala Gln Xaa Leu Arg Arg Ala Gly Asp Xaa Ala
1               5                   10


<210>  29
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 29


<220>
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       a linker

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  29

Ile Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1               5                   10


<210>  30
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 30


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<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       a linker

<220>
<221>  MISC_FEATURE
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<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
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<400>  30

Ile Ala Gln Xaa Leu Ser Ser Ile Gly Asp Xaa Phe
1               5                   10


<210>  31
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 31


<220>
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<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  31

Ile Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe Asn Ala Ser Phe
1               5                   10                  15


<210>  32
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 32


<220>
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<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       a linker

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       a linker

<400>  32

Lys Ile Ala Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1               5                   10
```

```
<210>    33
<211>    13
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    Peptide 33


<220>
<221>    MISC_FEATURE
<222>    (1)..(1)
<223>    X = any amino acid residue, wherein it is linked to residue 8 by
         linker NH(CH2)5NH

<220>
<221>    MISC_FEATURE
<222>    (8)..(8)
<223>    X = any amino acid residue, wherein it is linked to residue 1 by
         linker NH(CH2)5NH

<400>    33

Xaa Ile Ala Gln Glu Leu Arg Xaa Ile Gly Asp Glu Phe
1                5                10


<210>    34
<211>    12
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    Peptide 34


<220>
<221>    MISC_FEATURE
<222>    (4)..(4)
<223>    X = any amino acid residue, wherein it is linked to residue 11 by
         linker NH(CH2)5NH

<220>
<221>    MISC_FEATURE
<222>    (11)..(11)
<223>    X = any amino acid residue, wherein it is linked to residue 4 by
         linker NH(CH2)5NH

<400>    34

Ile Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1                5                10


<210>    35
<211>    12
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    Peptide 35
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<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       linker NH(CH2)6NH

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       linker NH(CH2)6NH

<400>  35

Ile Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1               5                   10


<210>  36
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Peptide 36


<220>
<221>  MISC_FEATURE
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<223>  X = any amino acid residue, wherein it is linked to residue 11 by
       linker NHCH2CONH(CH2)2NH

<220>
<221>  MISC_FEATURE
<222>  (11)..(11)
<223>  X = any amino acid residue, wherein it is linked to residue 4 by
       linker NHCH2CONH(CH2)2NH

<400>  36

Ile Ala Gln Xaa Leu Arg Arg Ile Gly Asp Xaa Phe
1               5                   10


<210>  37
<211>  13
<212>  PRT
<213>  Artificial Seqquence

<220>
<223>  Peptide 37

<400>  37

Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn
1               5                   10


<210>  38
<211>  26
<212>  PRT
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<213> Artificial Sequuence

<220>
<223> Peptide 38

<400> 38

Asp Leu Arg Pro Glu Ile Arg Ile Ala Gln Glu Leu Arg Arg Ile Gly
1   5   10   15

Asp Glu Phe Asn Glu Thr Tyr Thr Arg Arg
            20   25

<210> 39
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 39

<400> 39

Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn
1   5   10

<210> 40
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 40

<220>
<221> MOD_RES
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<223> Biotinylation

<400> 40

Asp Leu Arg Pro Glu Ile Arg Ile Ala Gln Glu Leu Arg Arg Ile Gly
1   5   10   15

Asp Glu Phe Asn Glu Thr Tyr Thr Arg Arg
            20   25

<210> 41
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 41

<400> 41

Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe
1   5   10

<210>   42
<211>   13
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Peptide 42

<400>   42

Gln Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe
1   5   10

<210>   43
<211>   13
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Peptide 43

<220>
<221>   MISC_FEATURE
<222>   (1)..(1)
<223>   linked to residue 8 by a linker

<220>
<221>   MISC_FEATURE
<222>   (8)..(8)
<223>   linked to residue 1 by a linker

<400>   43

Glx Ile Ala Gln Glu Leu Arg Glx Ile Gly Asp Glu Phe
1   5   10

<210>   44
<211>   12
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Peptide 44

<220>
<221>   MISC_FEATURE
<222>   (4)..(4)
<223>   linked to residue 11 by a linker

<220>
<221>   MISC_FEATURE
<222>   (11)..(11)
<223>   linked to residue 4 by a linker

<400>   44

```
Ile Ala Gln Glx Leu Arg Arg Ile Gly Asp Glx Phe
1               5                   10
```

<210> 45
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 45

<400> 45

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Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe
1               5                   10
```

<210> 46
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 46

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> linked to 9 by a linker

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> linked to 2 by a linker

<400> 46

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Ile Glx Ile Ala Gln Glu Leu Arg Glx Ile Gly Asp Glu Phe Asn Ala
1               5                   10                  15
```

<210> 47
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 47

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> linked to residue 13 by a linker

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> linked to residue 6 by a linker

<400> 47

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Ile Trp Ile Ala Gln Glx Leu Arg Arg Ile Gly Asp Glx Phe Asn Ala
1               5                   10                  15
```

<210> 48
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 48

<220>
<221> MISC_FEATURE
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<223> linked to residue 16 by a linker

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> linked to residue 9 by a linker

<400> 48

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Ile Trp Ile Ala Gln Glu Leu Arg Glx Ile Gly Asp Glu Phe Asn Glx
1               5                   10                  15
```

<210> 49
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 49

<400> 49

```
Glu Ile Ala Gln Glu Leu Arg Glu Ile Gly Asp Glu Phe
1               5                   10
```

<210> 50
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide 49

<400> 50

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Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala
1               5                   10                  15
```

<210> 51
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223>   G (constrained)

<220>
<221>   MISC_FEATURE
<222>   (6)..(6)
<223>   linked to residue 13 by a linker

<220>
<221>   MISC_FEATURE
<222>   (13)..(13)
<223>   linked to residue 6 by a linker

<400>   51

Gln Ala Ile Ala Gln Glx Leu Arg Arg Ile Gly Asp Glx Phe Asn Ala
1   5   10   15

<210>   52
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   H (linear)

<400>   52

Ile Trp Ile Ala Gln Gln Leu Arg Arg Ile Gly Asp Gln Phe Asn Ala
1   5   10   15

<210>   53
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   I (linear)

<400>   53

Ile Trp Ala Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala
1   5   10   15

<210>   54
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   J (linear)

<400>   54

Ile Trp Ile Ala Gln Glu Ala Arg Arg Ile Gly Asp Glu Phe Asn Ala
1   5   10   15

```
<210>  55
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  K (linear)

<400>  55

Ile Trp Ile Ala Gln Glu Leu Arg Arg Ala Gly Asp Glu Phe Asn Ala
1               5                   10                  15


<210>  56
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  L (linear)

<400>  56

Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Ala Asn Ala
1               5                   10                  15


<210>  57
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  M (linear)

<400>  57

Ile Trp Ala Ala Gln Glu Ala Arg Arg Ala Gly Asp Glu Ala Asn Ala
1               5                   10                  15


<210>  58
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  N (linear)

<400>  58

Ile Phe Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala
1               5                   10                  15


<210>  59
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  O (linear)
```

<400> 59

```
Ala Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala
1               5                   10                  15
```

<210>   60
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   P (linear)

<400>   60

```
Ile Ala Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala
1               5                   10                  15
```

<210>   61
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Q (linear)

<400>   61

```
Ile Arg Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala
1               5                   10                  15
```

<210>   62
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   R (linear)

<400>   62

```
Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Ala Asn
1               5                   10                  15
```

<210>   63
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   S (linear)

<400>   63

```
Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Ala Ala
1               5                   10                  15
```

```
<210>  64
<211>  20
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  T (linear)

<400>  64

Ile Trp Ile Ala Gln Glu Leu Cys Ile Thr Cys Ile Thr Ile Gly Asp
1               5                   10                  15


Glu Phe Asn Ala
            20


<210>  65
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  U (linear)

<400>  65

Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Asn
1               5                   10                  15


<210>  66
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Puma

<400>  66

Arg Glu Ile Gly Ala Gln Leu Arg Arg Met Ala Asp Asp Leu Asn Ala
1               5                   10                  15


<210>  67
<211>  16
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Bmf

<400>  67

Val Gln Ile Ala Arg Lys Leu Gln Ala Ile Ala Asp Gln Phe His Arg
1               5                   10                  15


<210>  68
<211>  26
<212>  PRT
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Page 34

<213>   Artificial Sequence

<220>
<223>   hsBimL/Bod (81-106)

<400>   68

Asp Met Arg Pro Glu Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly
1   5   10   15

Asp Glu Phe Asn Ala Tyr Tyr Ala Arg Arg
            20   25

<210>   69
<211>   16
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Retro inverso peptide

<400>   69

Ala Asn Phe Glu Asp Gly Ile Arg Arg Leu Glu Gln Ala Ile Trp Ile
1   5   10   15